

## 5.0 CORRECTIVE ACTIONS

### 5.1 WETLANDS

No corrective actions have been completed in the WMAs to date. The wetland mitigation construction completed during 2006 and 2007 has successfully created and enhanced 2.80 acres of functional wetlands within the mitigation areas. The USACE, however, required creation and enhancement of 3.59 acres of wetlands in WMA A and additional 0.52 acre of wetland creation in WMA B, for a total of 4.11 acres of mitigation wetlands to achieve the permit requirement of 3.07 acres of mitigation credit. Both WMAs A and B have provided less wetland acreage than designed. Therefore an additional 1.3 acres of wetlands will be required to meet this requirement.

CEC recommends selective grading and planting of non-wetland areas within WMAs A and B to gain additional wetland acreage. Installation of the step pool structures in Long Run will reverse headcutting and drainage of WMA A by Long Run and may restore wetland hydrology and wetland area within WMA A. Additionally, filling runways excavated by beaver along the southeast end of WMA A would further limit drainage of the wetland by Long Run. Even with these measures, an additional mitigation site may be needed to meet the USACE wetland mitigation requirement.

### 5.2 STREAMS

Stream enhancement activities along Long Run and Piney Creek North, Piney Creek South, and Long Run have had mixed success. Live stakes, both high and low density riparian buffer plantings, and boulder toe protection measures are largely successful. Log vanes and J-hooks, steep slope restoration, and coir logs and matting are only partly successful. In areas where coir logging or matting has failed, additional live staking is recommended. Additional areas where erosion has degraded stream bank reaches should also be graded and planted with live stakes and rooted woody vegetation. Recommended corrective actions for each stream reach are listed in Table 3.